

Amendments to the Claims

I. Amendments

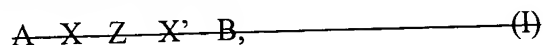
Please cancel claims 1-2, and 4-46, without prejudice or disclaimer thereto.

Please amend claim 3 as indicated below, and add new claims 47-65.

II. The Claims of the Application

Claims 1.-2. (Cancelled)

Claim 3. (Currently Amended) A method of producing a composition containing The modified protein or polypeptide molecules, or salts thereof, wherein said modified protein or polypeptide molecules of said composition consist essentially of a compound selected from of claim 1 having the formula



in which



wherein

A is a residue of a protein or polypeptide having a carboxy and amino terminus and is connected to X-Z-X'-B exclusively at said carboxy or amino terminus;

B is a polymeric compound ~~residue of a protein or polypeptide, a reporter group or a cytotoxic agent;~~

X and X' independently from each other are bivalent organic radicals or independently from each other are present or ~~may be absent;~~

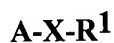
Z is a bivalent radical selected from the group consisting of:
-C(R)=N-, -N=C(R)-, -CH(R)-NH-, -NH-CH(R)-,
-C(R)=N-Y-N=C(R)-, -N=C(R)-Y-C(R)=N-,
-CH(R)-NH-Y-NH-CH(R)- and -NH-CH(R)-Y-CH(R)-NH-,
-C(R)=N-O-, -O-N=C(R)-, -CH(R)-NH-O-, -O-NH-CH(R)-,
-C(R)=N-O-Y-O-N=C(R)-, -O-N=C(R)-Y-C(R)=N-O-,
-CH(R)-NH-O-Y-O-NH-CH(R)- and -O-NH-CH(R)-Y-CH(R)-
NH-O-;

where

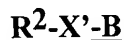
R is hydrogen or an aliphatic, cycloaliphatic, aromatic or
araliphatic hydrocarbon group, ~~which group may be substituted~~
~~with the same or a different protein or polypeptide, a reporter~~
~~group or a cytotoxic agent, with at least one aromatic radical or~~
~~oxygen adjacent to nitrogen;~~ and

Y is a bivalent organic group,

wherein said method comprises condensing a compound of the
formula:



wherein R¹ is a -CO-R group, an acetalized formyl group, or an
amino or protected amino group, and A, R, and X are as defined
above, with a compound of formula:



or a compound of formula:



where R² is amino when R¹ is -CO-R or acetalized formyl and R² is -
CO-R or acetalized formyl when R¹ is amino, and X', Y, R and B are
as defined above, to form a Schiff base, hydrazone, oxime or
azomethine compound, and optionally,

reducing the $-C(R)=N-$ or $-N=C(R)$ formed by the condensation to $CH(R)-NH-$ or $-NH-CH(R)-$, respectively, and optionally forming a salt.

Claims 4-46 (Cancelled)

- Claim 47. (New) The method of producing a composition of claim 3, wherein said residue A is a carboxy terminal residue.
- Claim 48. (New) The method of producing a composition of claim 3, wherein said residue A is an amino terminal residue.
- Claim 49. (New) The method of producing a composition of claim 3, wherein said polymeric compound B is a protein or polypeptide that is the same or different from said protein or polypeptide A, or is a reporter group or cytotoxic agent.
- Claim 50. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a protein or polypeptide that is the same as said protein or polypeptide A.
- Claim 51. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a protein or polypeptide that is different from said protein or polypeptide A.
- Claim 52. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a reporter group.
- Claim 53. (New) The method of producing a composition of claim 49, wherein said polymeric compound B is a cytotoxic agent.

- Claim 54. **(New)** The method of producing a composition of claim 52, wherein said polymeric compound B is a reporter group comprising a metal chelating organic compound.
- Claim 55. **(New)** The method of producing a composition of claim 3, wherein R is hydrogen.
- Claim 56. **(New)** The method of producing a composition of claim 3, wherein said polymeric compound B comprises a compound selected from the group consisting of:
- (i) desferioxamine B, or a metal derivative thereof;
 - (ii) diethylenetriaminepentaacetic acid, or a metal derivative thereof;
 - (iii) [N ϵ -(diethylenetriaminepentaacetic acid -alanyl)-Lys]₅, or a metal derivative thereof; and
 - (iv) a polyglutamic acid having at least two ferioxamine B residues coupled thereto.
- Claim 57. **(New)** The method of producing a composition of claim 3, wherein Z is -CH₂-NH- , or -NH-CH₂- .
- Claim 58. **(New)** The method of producing a composition of claim 3, wherein Z is -C(R)=N- , or -N=C(R)- .
- Claim 59. **(New)** The method of producing a composition of claim 3, wherein Z is -CH(R)-NH-, or -NH-CH(R)-.
- Claim 60. **(New)** The method of producing a composition of claim 3, wherein Z is -C(R)=N-O- or -O-N=C(R)- .

- Claim 61. **(New)** The method of producing a composition of claim 3, wherein Z is
CH(R)-NH-O-, -O-NH-CH(R)- .
- Claim 62. **(New)** The composition of claim 3, wherein Z is
-C(R)=N-Y-N=C(R)-, -N=C(R)-Y-C(R)=N-, -CH(R)-NH-Y-NH-CH(R)-
or -NH-CH(R)-Y-CH(R)-NH-.
- Claim 63. **(New)** The composition of claim 3, wherein Z is
-CH=N-Y-N=CH- , -N=CH-Y-CH=N- , -CH₂-N-Y-N-CH₂- ,
or -NH-CH₂-Y-CH₂-NH- .
- Claim 64. **(New)** The composition of claim 3, wherein Z is
-C(R)=N-O-Y-O-N=C(R)- , -O-N=C(R)-Y-C(R)=N-O-.
- Claim 65. **(New)** The composition of claim 3, wherein Z is
-CH(R)-NH-O-Y-O-NH-CH(R)- or
-O-NH-CH(R)-Y-CH(R)-NH-O-.